

REMARKS/ARGUMENTS

Claims 1-17 have been previously cancelled. Claims 18-40 are currently pending in this application and are at issue herein.

§ 102 Claim Rejections

Claims 18-29 stand rejected under 35 U.S.C. § 102(b) as being anticipated by International Publication No. WO 01/06740 to Duffy et al. ("Duffy"). Applicants respectfully traverse the claims rejections for at least the following reasons.

The present invention is directed toward an adapter unit and method for handling a central office line, or an exchange line, of a public telecommunications network at a telecommunication system. The telecommunication system is used for operating a private telecommunications network, *e.g.*, a company telephone network. The telecommunication system is used for switching connections between the terminals of the private telecommunications network or for switching connections to or from a public telecommunications network, or telephone network. Through the inventive adapter unit and method, an exchange line leading to a branch office can be connected to a remote central telecommunication system with minimal switching effort and, in particular, without the need for a local telecommunication system in the branch office. In spite of this, the inventive adapter unit and method allows utilization of the same advantages which are normally only available by using a local telecommunication system in the branch office.

The adapter unit and method of the present invention ensures that terminals in the branch office are at least conditionally ready for use in spite of a crash of the central telecommunication

system or a crash of the data packet carrier network. Therefore, the inventive adapter unit and method provides for a normal mode of operation and an emergency mode of operation should a crash occur.

In the normal mode of operation, the objective is control of the branch office terminals by the central communication network. To achieve this, the received signaling data from the local public network is not directly provided to the designated receiver at the branch office terminal, but is initially first transmitted to the central communication network. Transmitting of the signaling data is handled by "tunneling" the data packets through a data transmitting network which connects the central telecommunication system with the branch office. Tunneling allows the private signaling data to be transmitted as data packets over the public network while keeping the data relatively secure.

The signaling data is, thereafter, arranged in the central telecommunication system and, as a result of the arrangement, the signaling data is transmitted back through the adapter unit to the public telecommunication network or to the branch office terminals. Thus, the inventive adapter unit and method works, in the normal mode, as a relay between the public telecommunication network and the central telecommunication system. As set forth in independent claim 18, the relay feature of the inventive adapter unit is realized as follows:

1. A channel send-receive unit that sends signaling data to an exchange of a circuit-switched telecommunications network (*i.e.*, public telecommunication network) and receives signaling data from the exchange.
2. A data insertion-extraction unit that inserts, in the normal mode, signaling data into data packets and forwards the packets to the data packet send unit, and then also extracts

signaling data from a data packet received by the data packet receive unit and forwards the extracted signaling data to the channel send unit.

3. A data packet send-receive unit that, in a normal mode, sends and receives data packets to and from a first telecommunication system (*i.e.*, central telecommunication system) via a data packet transfer network.
4. An operating mode switchover unit that switches over from the normal operating mode to an emergency operating mode if a fault occurs on the side of the data packet transfer network to ensure telecommunication via the circuit-switched telecommunications network (public telecommunication network).

In other words, in the emergency operation mode due to a crash of the packet oriented communication with the telecommunication system (either through a crash of the telecommunication system or through the loss of the network communication), the above-mentioned functions of elements 2 and 3 above are not used. Thus, the relay function of the inventive adapter and method to the central telecommunication system controlled in the normal mode is not utilized. In the emergency operating mode, the signaling data is forwarded by the operating mode switchover unit to a second telecommunication system which is different from the first telecommunication system used in the normal operating mode, and signaling data received from the second telecommunication system is sent to the exchange via the channel send unit.

The function of the inventive adapter unit and method is to avoid any disconnection of the signaling data. Signaling data is used for building and maintenance and controlling of the communication connection essential data, and is different from user data (*e.g.*, "payload" or

language data) of the communication connection. Through the present invention, instruments are provided to realize a cost-efficient emergency operation during a breakdown of the telecommunication connection at the central telecommunication system or during a breakdown of the network located between the central telecommunication system and the branch office.

Duffy essentially discloses an affiliate system which can be used in a branch office. However, the method recited in Duffy of resolution does not address the transmission of the signaling data in the sense of the relaying the signaling data, in accordance with the present invention, to a central communication network. To the contrary, the local affiliate system (Gateway Network 30) in Duffy disposes of mediums (namely, Telephony Cards in a designated Gateway Server 31), which directly works with a connected interconnect switching telecommunication network (PSTN) and, in this way (*see Duffy*, pg. 9, lns. 8-10), captures the full functionality of the telecommunication construction, and especially the connection achievement (*i.e.*, routing). Contrary to a transmission of signaling data according to the present invention of a branch office adapter unit to a central communication system, the Duffy system is silent with respect to the development of the signaling data. The local enforcement of a connection in the Duffy system teaches one skilled in the art away from the solution of delegation of the signaling data enforcement in accordance with the present invention.

The explanations made in Duffy regarding the "Fallback to PSTN" do not equate with the conception according to the present invention of an emergency operating mode due to a total crash of the packet oriented communication. This difference is best seen by considering the procedure of Duffy described at page 22, lines 20-30. A local detraction of the communication quality ("QoS degradation") in the package oriented communication will be announced by the

package oriented network (*see* lines 21-23), checked by a package oriented news consequence once more (*see* lines 23-26), and in the end coordinated by a package coordinated news sequence (*see* lines 28-30). In contrast with the present invention, should a breakdown of the package oriented communication and/or the central communication unit occur in Duffy, such package oriented arraignments are not possible.

Further differentiating the present invention is that in the emergency mode of operation due to the breakdown of the communication from the branch office to the central communication unit, a reorganization occurs in the handling of the signaling data. In contrast, Duffy illustrates an emergency mode where a deviation (re-routing) of the communication connection take place so that both signaling and reference data themselves are re-routed. (*see Duffy*, pg. 3, lns. 15-18).

The Office Action cites page 3, lines 1-18 of Duffy as illustrating a channel send-receive unit and a data packet send-receive unit. However, this recitation of Duffy merely outlines certain objects of the Duffy system relating to the routing of calls. There is no teaching of the recited channel send-receive unit and data packet send-receive unit. Admittedly, Duffy and the present invention share some common elements, including the placing of a telephone call over a WAN IP network or the PSTN. But the similarity ends at this abstract level of disclosure, as Duffy does not disclose the various units recited in independent claim 18. Further, the cited passage of Duffy includes no mention of signaling data, but instead discusses generally the gateway that connects the WAN IP network and the PSTN.

The Office Action cites page 10, lines 1-6 of Duffy as disclosing a data insertion-extraction unit. However, this cited passage of Duffy includes no disclosure of any type of data insertion-extraction unit or the functionality of inserting and extracting signaling data into data

packets. This recitation of Duffy merely discloses that a VoIP driver consists of hardware and software that handles a conversion between voice data in the format required for the station/trunk driver telephony interface and the IP packet format required by the WAN IP network. Nothing in this passage of Duffy suggests any type of insertion or extraction of signaling data.

The Office Action cites page 3, lines 12-18 of Duffy as disclosing the operating mode switchover unit. Again, this recitation of Duffy merely recites an abstract object of the invention. Although the Duffy reference relates in general to re-routing a call from the WAN IP network to the PSTN if the quality of the call falls below predetermined quality level, Duffy is silent with respect to the processing of the signaling data during this switchover. For example, Duffy is devoid of the limitation in claim 18 that: "wherein the signaling data is not processed by the adapter unit during the normal operating mode." While the Office Action cites Figs. 8A and 8B of Duffy as allegedly disclosing this element, Applicants are unclear as to how these figures can disclose such a limitation when there is no indication of any adapter unit in Duffy.

Accordingly, for at least the reasons identified above, claims 18 and 28-29 are believed allowable over the prior art.

Claims 19-27 depend cognately from independent claim 18 and add features which further remove the present invention from the prior art. Given at least the distinctions identified above, the dependent claims are believed allowable over the prior art and a separate discussion of them will not belabored for the sake of brevity.

§ 103 Claim Rejections

Claims 30-40 stand rejected under 35 U.S.C. § 103(a) as being obvious over Duffy. Applicants respectfully traverse the claims rejections for at least the following reasons.

Claims 30-37 depend cognately from independent claim 28 and add features which further remove the present invention from the prior art. Claim 28 has been previously discussed and is believed allowable over the prior art. Given at least the distinctions identified above with respect to independent claim 28, dependent claims 30-37 are believed allowable over the prior art and a separate discussion of them will not belabored for the sake of brevity.

With respect to independent claim 38, the Office Action refers to the rejection of independent claims 18 and 28, and notes that Duffy teaches those claimed features except for detecting a reactivation of the data packet transfer network or of the first telecommunication system, and automatically switching over into a normal operating mode after the detection of the reactivation. Even though the Office Action takes official notice of switching to normal operating mode after reactivation, independent claim 38 includes several elements beyond this exception noted in the Office Action. Independent claim 38 includes many of the same steps which are recited in independent claim 28 which, as discussed fully above, are neither disclosed nor suggested in Duffy.

Thus, for at least the same reasons previously set forth with respect to independent claim 28, independent claim 38 is also believed allowable over the prior art.

Claims 39-40 depend cognately from independent claim 38 and add features which further remove the present invention from the prior art. Given at least the distinctions identified above, the dependent claims are believed allowable over the prior art and a separate discussion of them will not belabored for the sake of brevity.

Conclusion

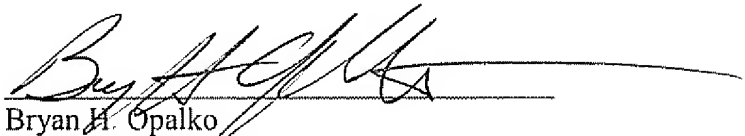
For at least the above-identified reasons, claims 18-40 are believed allowable over the prior art. Allowance and passage to issue are respectfully requested. Early notification to that effect is respectfully requested.

It is believed that this Response requires a one (1) month extension of time in addition to the fee for requesting continued examination. Accordingly, a Petition for a One Month Extension of Time is enclosed herewith. The RCE fee and the one month extension fee are being paid by credit card. If additional fees are required for any reason, or if there is any underpayment of fees, the Commissioner is hereby authorized to charge Deposit Account No. 02-4800 the necessary amount.

Should any issues remain, the Examiner is invited to contact the undersigned at the number listed below to advance prosecution of the case. The Examiner is respectfully requested to direct further communications in this case to the attention of the undersigned.

Respectfully submitted,

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